PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

09830 472714

Applicant's or agent's file reference 25550WOP00 PRH:hl	**FOR FURTHER ACTION** .	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. **PCT/AU99/00946**	International Filing Date *(day/month/year)* 1 November 1999	Priority Date *(day/month/year)* 30 October 1998
International Patent Classification (IPC) or national classification and IPC **Int. Cl.** [7] B65D 79/02		
Applicant RICHARDSON, Donald George		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

   [X] This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 8 sheet(s).

3. This report contains indications relating to the following items:

I	[X]	Basis of the report
II	[ ]	Priority
III	[ ]	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	[ ]	Lack of unity of invention
V	[X]	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	[ ]	Certain documents cited
VII	[ ]	Certain defects in the international application
VIII	[ ]	Certain observations on the international application

Date of submission of the demand 25 May 2000	Date of completion of the report 8 February 2001
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer **SOOSA GNANASINGHAM** Telephone No. (02) 6283 2172

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/AU99/00946

I. Basis of the report

1. With regard to the elements of the international application:*

☐ the international application as originally filed.

☒ the description, pages **1-3, 6-11,** as originally filed,
pages , filed with the demand,
pages **4-5, 5/1,** received on **28 December 2000** with the letter of **28 December 2000**

☒ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages **12-16,** received on **28 December 2000** with the letter of **28 December 2000**

☒ the drawings, pages **1/4-4/4,** as originally filed,
pages , filed with the demand,
pages , received on with the letter of

☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language which is:

☐ the language of a translation furnisbed for the purposes of international searcb (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide **and/or amino acid** sequence disclosed in the international application, was on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnisbed.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/AU99/00946

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-26	YES
	Claims	NO
Inventive step (IS)	Claims 1-26	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-26	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

NOVELTY (N) & INVENTIVE STEP (IS) Claims 1-26

WO 96/13022 A

US 5552772 A

DE 19522392 A

FR 2710170 A

DE 19649136 A

DE 29806583 U1

Derwent Abstract Accession No. 98-282020/25, Class X22, JP 10097691 A, (OKI ELECTRIC IND CO LTD), 14 April 1998 - Abstract

Derwent Abstract Accession No. 97-409486/38, Class W01W02W06 JP 09182145 A (ICOM KK)11 July 1997- Abstract

Derwent Abstract Accession No. 98-135622/13, Class W05, JP 10011674 A, (NIPPON DENKI IDO TSUSHIN) 16 January 1998- Abstract

The closest prior art cited is WO 96/13022 A which discloses a method and apparatus for watching mobile objects. Claims 1 and 12 differ from WO 96/13022 in that the database is initiated to include consignment data and secure communication access is provided for accessing the database. Also the claimed invention is not obvious in the light of the above documents nor disclosed in any obvious combination, nor would it be obvious to a person skilled in the art in light of common general knowledge of itself or in combination with any of the above documents.

The appended claims are directed to other embodiments based on the inventive concept of claims 1 and 12. Claims 1-26 are therefore novel and inventive and satisfy the criteria of PCT Articles 33(2)-33(3).

All of the claims 1-26 satisfy the requirement of industrial applicability.

measuring a predetermined parameter or parameters of said consignment using a disposable sender device attachable to said consignment;

transmitting a signal containing data representative of said measured parameter to a central location; and

maintaining a database relating to said consignment at said central location, said database including said data representative of said measured parameters;

initiating said database to include consignment data for each consignment; and

providing secure communication access to said database to enable monitoring by enabled users of data available from said database.

Preferably. the parameter or parameters are measured continuously or at predetermined intervals and said data includes time indicative data associated with said measurements. For preference, the method includes the step of communicating the data to an intermediate sender device provided at the location of the consignment and transmitting the collected data from the intermediate sender device to the central location.

Preferably the method further includes the step of determining the location of the consignment and including data representative of the determined location in the data transmitted to the central location.

For preference, the database includes set point values associated with the consignment for one or more of the measured parameters and the method includes comparing measured values with corresponding set point values to determine whether the consignment is meeting predetermined conditions.

According to a second aspect the present invention provides a system for monitoring a consignment of goods including:

a sender device attachable to said consignment including a measurement means for measuring a predetermined parameter or parameters of said consignment;

first communication means for transmitting a signal containing data representative of said measured parameter to a central location; and

computer system means for maintaining a database relating to said consignment at said central location, said database including said data representative of said measured parameters and wherein said database is initiated to include consignment data for each consignment, and

a secure communication access means for providing access to said database to enable monitoring by enabled users of data available from said database.

Preferably, the system includes the first communication means in said sender device for communicating the data to an intermediate sender device provided at the location of the consignment and a second communication means being included in the intermediate sender device for transmitting the data from the intermediate sender device to the central location.

For preference, the system includes a location determining means for determining the location of the consignment and means for including data representative of the determined location in the data transmitted to the central location.

In one embodiment the attachable sender device is a small adhesively backed, robustly designed, inexpensive and non-returnable, battery powered, temperature monitor and sender. This sender device is fastened to pallet loads of perishable products

that may require shipment between specified temperature ranges to ensure food safety risks are eliminated and food quality is maximised. Typically, chilled foods being kept at 4°C or below and frozen foods at -18°C or below.

Preferably, the sender/s and tracker are generating location and time data signals, together with the accurate temperature signals, and these signals are communicated to a central database operated on behalf of numerous perishables freight originators. Such mobile communication of simple data signals is via appropriate technologies depending

CLAIMS:-

1. [Amended] A method of monitoring a consignment of goods including the following steps:

measuring a predetermined parameter or parameters of said consignment using a disposable sender device attachable to said consignment;

transmitting a signal containing data representative of said measured parameter to a central location;

maintaining a database relating to said consignment at said central location, said database including said data representative of said measured parameters;

initiating said database to include consignment data for each consignment; and

providing secure communication access to said database to enable monitoring by enabled users of data available from said database.

2. A method of monitoring according to claim 1 wherein said parameter or parameters are measured continuously or at predetermined intervals and said data includes time indicative data associated with said measurements.

3. A method of monitoring according to claim 2 wherein the parameter is the temperature of the consignment.

4. A method of monitoring according to claim 1 or claim 2 including the step of communicating the data to an intermediate sender device provided at the location of the

consignment and transmitting the data from the intermediate sender device to said central location.

5. A method of monitoring according to claim 4 including the step of determining the location of the consignment and including data representative of the determined location in said data transmitted to said central location.

6. A method of monitoring according to any one of the preceding claims including the step of storing said data in a storage means before transmission to said central location.

7. A method of monitoring according to claim 6 when appended to claims 4 or 5 wherein said storage means is provided in said intermediate sender device.

8. A method of monitoring according to anyone of the preceding claims wherein said database includes set point values associated with said consignment for one or more of said measured parameters and the method includes comparing measured values with corresponding set point values to determine whether the consignment is meeting predetermined conditions.

9. [amended] A method of monitoring according to any one of the preceding claims wherein said consignment data for each consignment includes dispatch and product data.

10. cancelled

11. [amended] A method of monitoring according to any one of the preceding claims wherein said secure communication access is provided via the Internet.

12. [amended] A system for monitoring a consignment of goods including:

a sender device attachable to said consignment including a measurement means for measuring a predetermined parameter or parameters of said consignment;

first communication means for transmitting a signal containing data representative of said measured parameter to a central location;

computer system means for maintaining a database relating to said consignment at said central location, said database including said data representative of said measured parameters and wherein said database is initiated to include consignment data for each consignment, and

a secure communication access means for providing access to said database to enable monitoring by enabled users of data available from said database.

13. A system for monitoring according to claim 12 wherein said parameter or parameters are measured continuously or at predetermined intervals and said data includes time indicative data associated with said measurements.

14. A system for monitoring according to claim 13 wherein the parameter is the temperature of the consignment.

15. A system for monitoring according to claim 12, claim 13 or claim 14 wherein said first communication means is included in said sender device for communicating the data to an intermediate sender device provided at the location of the consignment and a second communication means being included in said intermediate sender device for transmitting the data from the intermediate sender device to said central location.

16. A system for monitoring according to claim 15 including location determining means for determining the location of the consignment and means for including data representative of the determined location in said data transmitted to said central location.

17. A system for monitoring according to claim 16 wherein said location determining means includes a global positioning system.

18. A system for monitoring according to claim 16 or 17 wherein said location determining means is included in said intermediate sender device.

19. A system for monitoring according to any one of claims 12 to 18 including a storage means for storing said data before transmission to said central location.

20. A system for monitoring according to claim 19 when appended to any one of claims 15 to 18 wherein said storage means is provided in said intermediate sender device.

21. A system for monitoring according to any one of claims 12 to 20 wherein the sender device is disposable and battery powered.

22. A system for monitoring according to any one of claims 12 to 20 wherein the sender device is disposable and inductively powered from said intermediate sender device.

23. A system for monitoring according to anyone of claims 12 to 22 wherein said database includes set point values associated with said consignment for one or more of said measured parameters and said computer system means includes comparison means for comparing measured values with corresponding set point values to determine whether the consignment is meeting predetermined conditions.

24. [amended] A system for monitoring according to any one of claims 12 to 23 wherein said consignment data for each consignment includes dispatch and product data.

25. cancelled.

26. [amended] A system for monitoring according to any one of claims 12 to 24 wherein said secure communication access means provides said access via the Internet.